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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,118	11/14/2003	David D. Szarka	HES 2003-IP-010133U1	1948
29920	7590	07/24/2006	EXAMINER	
JOHN W. WUSTENBERG P.O. BOX 1431 DUNCAN, OK 73536			BATES, ZAKIYA W	
			ART UNIT	PAPER NUMBER
			3676	

DATE MAILED: 07/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/714,118

Applicant(s)

SZARKA, DAVID D.

Examiner

Zakiya W. Bates

Art Unit

3676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-33 and 72-115 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14-18, 24, 27, 30, 31, 72-86, 90-93 and 99-115 is/are rejected.
- 7) ☒ Claim(s) 13, 19-23, 25, 26, 28, 29, 32, 33, 87-89, and 94-98 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-12, 14-18, 24, 27, 30, 31, 72-86, 90-93, and 99-115 are rejected under 35 U.S.C. 102(b) as being anticipated by US 4,364,432.

US 4,364,432 discloses a method that includes, with respect to claim 1, a method of separating fluids (cement and displacement fluids) successively introduced into a passage comprising the step of introducing a plug 40 at an interface of the successively introduced fluids, wherein the plug comprises an outer body and a detachable inner mandrel 14 attached to the outer body. With respect to the depending claims, the reference teaches the limitations as claimed, including a frangible device 90 and applying differential pressure. With respect to claim 5, the reference discloses a method that includes a method of separating fluids successively introduced into a subterranean well bore, comprising the steps of: introducing a first fluid (cement) into the well bore through a casing string; introducing a second fluid (displacement fluid) into the well bore behind the first fluid such that an interface between the two fluids is

formed; suspending an assembly comprising a plurality of plugs 40 within the casing string, wherein at least one of the plugs comprises an outer body and a detachable inner mandrel 14 attached to the outer body; and deploying the at least one plug within the casing string at the interface of the first and second fluids. With respect to the depending claims, the reference teaches the limitations as claimed, including a free fall releasing device (dart 50), profile 26, latch-down mechanism 54, frangible device 90, differential pressure, and float valve 30. See the entire document, especially Figs. 1-5. With respect to claims 72 and 101, the reference discloses a plug system for separating fluids successively introduced into a passage comprising; an assembly comprising a plurality of plugs 40, wherein at least one plug comprises an outer body and a detachable inner mandrel 14 attached to the outer body; and wherein the plurality of plugs are releasably attached to each other. With respect to the depending claims, the reference teaches the limitations as claimed, including a profile, latch-down mechanism, frangible device, and wiper fins. See the entire document, especially Figs. 1-5.

3. Claims 1-10, 12, 14, 16-18, 24, 27, 31, 72-83, 85, 86, 90, 91, 93, 99, 101-112, and 114 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,799,638

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

US 6,799,638 discloses a method that includes, with respect to claim 1, a method of separating fluids (cement and drilling fluids) successively introduced into a passage comprising the step of introducing a plug 10 at an interface of the successively introduced fluids, wherein the plug comprises an outer body and a detachable inner mandrel 17 attached to the outer body. With respect to the depending claims, the reference teaches the limitations as claimed, including a frangible device 30 and applying differential pressure. With respect to claim 5, the reference discloses a method that includes a method of separating fluids successively introduced into a subterranean well bore, comprising the steps of: introducing a first fluid (cement) into the well bore through a casing string; introducing a second fluid (drilling fluid) into the well bore behind the first fluid such that an interface between the two fluids is formed; suspending an assembly comprising a plurality of plugs 11, 12 within the casing string, wherein at least one of the plugs comprises an outer body and a detachable inner mandrel 17 attached to the outer body; and deploying the at least one plug within the casing string at the interface of the first and second fluids. With respect to the depending claims, the reference teaches the limitations as claimed, including a free fall releasing device (ball or dart), latch-down mechanism, frangible device 30, differential pressure, and float valve (not shown, at bottom of 15). With respect to claims 72 and 101, the reference discloses a plug system for separating fluids successively introduced into a passage comprising; an assembly comprising a plurality of plugs 11, 12, wherein at least one plug comprises an outer body and a detachable inner mandrel 17 attached to the outer body; and wherein the plurality of plugs are releasably attached to each

other. With respect to the depending claims, the reference teaches the limitations as claimed, including a latch-down mechanism, frangible device, and wiper fins. See the entire document, especially Figs. 1-5.

***Allowable Subject Matter***

4. Claims 13, 19-23, 25, 26, 28, 29, 32, 33, 87-89, and 94-98 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

5. Applicant's arguments filed 5/9/06 have been fully considered but they are not persuasive. Applicant argues that neither the US 4,364,432 nor US 6,799,638 references disclose a method/apparatus that includes a detachable inner mandrel, which is unfounded. US'432 reference shows in the figures and explains in col. 5, lines 10-21 that inner mandrel 14 (within plug 40) is detachable. The claims clearly require that the plug "comprises" the detachable inner mandrel, which the reference satisfies. US'638 reference shows in the figures and explains in at least col. 4, lines 1-35 and col. 6, lines 5-22 that inner mandrel 17 (within plug 11, 12) is detachable. The claims clearly require that the plug "comprises" the detachable inner mandrel, which the reference satisfies.

***Conclusion***


6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zakiya W. Bates whose telephone number is (571) 272-7039. The examiner can normally be reached on Monday-Friday, 8:30 AM-5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Glessner can be reached on (571) 272-6843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Zakiya W. Bates  
Primary Examiner  
Art Unit 3676

zb  
July 20, 2006